WHAT IS CLAIMED IS:

1. A method for improving focus accuracy in a lithography system including an exposing area for exposing images onto top surfaces of substrates, comprising the steps of:

a. determining a proper focus distance for a specific region on a top surface of a substrate, the proper focus distance determined using a calibration sensor when the specific region is not positioned under the exposing area;

b. producing a first measurement relating to the specific region at the proper focus distance, the first measurement produced using a secondary control sensor when the specific region is not positioned under the exposing area;

c. producing a second measurement relating to the specific region, the second measurement produced using a primary control sensor while the specific region is positioned under the exposing area; and

d. adjusting an actual focus distance based on the first and second measurements while the specific region is positioned under the exposing area,

wherein the calibration sensor has a higher focus accuracy than each of the secondary control sensor and the primary control sensor.

2. The method of claim 1, further comprising the following step:

e. exposing at least a portion of the image on the specific region using exposing area.

3. The method of claim 1, wherein:

the first measurement corresponds to an output that the secondary control sensor should produce when the secondary control sensor is at the proper focus distance relative to the specific region, and

the second measurement corresponds to an output of the primary control sensor while the specific region is positioned under the exposing area.

4. The method of claim 3, wherein step (d) comprises adjusting the actual focus distance by adjusting the position of the specific region until the primary control sensor produces the first measurement while the specific region is positioned under the exposing area.

5. The method of claim 3, wherein step (d) comprises the steps of:

(i) determining a difference between the second measurement and the first measurement; and

(ii) adjusting the position of the specific region based on the difference.

6. The method of claim 1, wherein:

the first measurement relates to a distance D1 between the secondary control sensor and the specific region, prior to positioning the specific region under the exposing area, and

the second measurement relates to a distance D2 between the primary control sensor and the specific region, while the specific region is positioned under the exposing area.

7. The method of claim 6, wherein step (d) comprises the step of adjusting the focus distance by adjusting distance D2 to equal distance D1, thereby positioning the specific region at the proper focus distance with respect to the exposing area.

8. The method of claim 1, wherein the calibration sensor comprise at least one air gauge.

9. The method of claim 8, wherein the secondary control sensor comprises at least one capacitance gauge, and wherein the primary control sensor is substantially identical to the secondary control sensor.

10. The method of claim 1, wherein the calibration sensor comprises at least one optical gauge.

11. The method of claim 1, wherein the calibration sensor comprises at least one proximity probe.

12. The method of claim 1, wherein the exposing area comprises a lens.

13. The method of claim 1, wherein the exposing area projects an electron beam.

14. The method of claim 1, wherein the exposing area projects a shadow.

15. The method of claim 1, wherein the specific region referred to in each of steps (a), (b), (c) and (d) is located on the same substrate.

16. The method of claim 1, wherein the specific region referred to in steps (c) and (d) is located on a different substrate than the specific region referred to in steps (a) and (b).

17. The method of claim 16, wherein the different substrate is located on a different wafer than the specific region referred to in steps (a) and (b).

18. The method of claim 1, wherein the specific region referred to in steps (c) and (d) is located on a first field of a wafer, and wherein the specific region referred to in steps (a) and (b) is located on a second field of the wafer.

19. The method of claim 1, wherein steps (a) and (b) are performed at a location remote from the exposing area.

20. The method of claim 1, wherein the secondary control sensor and the primary control sensor are distinct sensors that are substantially identical to one another.

21. A method for improving focus accuracy in a lithography system including an exposing area for exposing an image onto a top surface of a substrate according to an exposure pattern, comprising the steps of:

a. moving the substrate in a manner that simulates the exposure pattern;

b. determining proper focus distances using a first type of sensor as the substrate is moved in a manner that simulates the exposure pattern, wherein each proper focus distance corresponds to a region on the top surface of the substrate prior to the region being positioned under the exposing area;

c. producing a set of measurements using a second type of sensor as the substrate is moved in the manner that simulates the exposure pattern, wherein each measurement in the set of measurements corresponds to a region on the top surface of the substrate when the specific region is at the proper focus distance as determined using the first type of sensor;

d. moving the substrate according to the exposure pattern such that a specific region on the top surface of the substrate is located under the exposing area;

e. producing a specific measurement relating to the specific region under the exposing area, the specific measurement produced using the second type of sensor; and

f. adjusting a focus distance based on the specific measurement and a corresponding measurement in the set of measurements,

wherein the first type of sensor has a higher focus accuracy than the second type of sensor.

22. The method of claim 21, further comprising the step of:

g. exposing at least a portion of the image on the specific region using exposing area.

23. The method of claim 12, further comprising the steps of:

h. moving the substrate according to the exposure pattern such that another specific region on the top surface is located under the exposing area;

i. repeating steps (e), (f), (g) and (h) a plurality of times.

24. The method of claim 21, wherein step (f) comprises adjusting the focus distance by adjusting the position of the specific region until the second type of sensor produces the corresponding measurement in the set of measurements while the specific region is positioned under the exposing area.

25. The method of claim 21, wherein step (f) comprises the steps of:

(i) determining a difference between the specific measurement relating to the specific region and the corresponding measurement in the set of measurements; and

(ii) adjusting the position of the specific region based on the difference.

26. The method of claim 21, wherein the first type of sensor comprises at least one air gauge.

27. The method of claim 26, wherein the second type of sensor comprises at least one capacitance gauge.

28. The method of claim 21, wherein steps (a), (b) and (c) are performed at a location remote from the exposing area.

29. The method of claim 21, wherein the second type of sensor used to determine the set of measurements is distinct from yet substantially identical to the second type of sensor used to determine the specific measurement.

30. The method of claim 21, wherein the exposing area comprises a lens.

31. A focus system for use in a lithography system including an exposing area for exposing an image onto a substrate according to an exposure pattern, the focus system comprising:

a calibration sensor to determine a proper focus distance relating to a specific region on a top surface of the substrate prior to positioning the specific region under the exposing area;

a secondary control sensor to produce a first measurement relating to the specific region at the proper focus distance, wherein the first control sensor produces the first measurement prior to the specific region being positioned under the exposing area;

a primary control sensor to produce a second measurement relating to the specific region while the specific region is positioned under the exposing area; and

a focus adjustor to adjust an actual focus distance based on the first and second measurements while the specific region is positioned under the exposing area,

wherein the calibration sensor has a higher focus accuracy than each of the secondary control sensor and the primary control sensor.

32. The system of claim 31, wherein:

the first measurement corresponds to an output that the secondary control sensor should produce when the secondary control sensor is at the proper focus distance relative to the specific region, and

the second measurement corresponds to an output of the primary control sensor while the specific region is positioned under the exposing area.

33. The system of claim 32, wherein the focus adjustor adjusts a position of the specific region until the primary control sensor produces the first measurement while the specific region is positioned under the exposing area.

34. The system of claim 32, wherein the adjustor adjusts a position of the specific region based on a difference between the second measurement and the first measurement.

35. The system of claim 31, wherein:

the first measurement relates to a distance D1 between the secondary control sensor and the specific region prior to positioning the specific region under the exposing area, and

the second measurement relates to a distance D2 between the primary control sensor and the specific region while the specific region is positioned under the exposing area.

36. The system of claim 35, wherein the adjustor adjusts the focus distance by adjusting distance D2 to equal distance D1, thereby positioning the specific region at the proper focus distance with respect to the exposing area.

37. The system of claim 31, wherein the calibration sensor comprises at least one air gauge.

38. The system of claim 37, wherein the secondary control sensor comprises at least one capacitance gauge, and wherein the primary control sensor is substantially identical to the secondary control sensor.

39. The system of claim 31, wherein the calibration sensor and the secondary control sensor are located remote from the exposing area, and wherein the primary control sensor is located in close proximity to the exposing area.

40. The system of claim 31, wherein the calibration sensor comprises at least one optical gauge.

41. The system of claim 31, wherein the calibration sensor comprises at least one proximity probe.

42. The system of claim 31, wherein the exposing area comprises a lens.

43. The system of claim 31, wherein the exposing area projects an electron beam.

44. The system of claim 31, wherein the exposing area projects a shadow.

45. The system of claim 31, wherein the specific region referred to with relation to the calibration sensor, the secondary control sensor, the primary control sensor, and the focus adjustor is located on the same substrate.

46. The system of claim 31, wherein the specific region referred to with relation to the calibration sensor and the secondary control sensor is located on a different substrate than the specific region referred to with relation to the primary control sensor and the focus adjustor.

47. The system of claim 46, wherein the different substrate is located on a different wafer than the specific region referred to with relation to the calibration sensor and the secondary control sensor.

48. The system of claim 31, wherein the specific region referred to with relation to the primary control sensor and the focus adjustor is located on a first field of a wafer, and wherein the specific region referred to with relation to the calibration sensor and the secondary control sensor is located on a second field of the wafer.

49. The system of claim 31, wherein the calibration sensor and the secondary control sensor are at a location remote from the exposing area.

50. The system of claim 31, wherein the secondary control sensor and the primary control sensor are distinct sensors that are substantially identical to one another.

51. A focus system for use in a lithography system including an exposing area for exposing an image onto a substrate according to an exposure pattern, the focus system comprising:

a calibration sensor to determine proper focus distances as the substrate is moved in a manner that simulates the exposure pattern prior to the substrate being positioned under the exposing area, wherein each proper focus distance corresponds to a region on the top surface of the substrate;

a secondary control sensor to produce a set of measurements as the substrate is moved in the manner that simulates the exposure pattern prior to the substrate being positioned under the exposing area, wherein each measurement in the set of measurements corresponds to a region on the top surface of the substrate when the specific region is at the proper focus distance as determined using the calibration sensor;

a primary control sensor to produce a specific measurement relating to a specific region on the surface of the substrate that is positioned under the exposing area; and

an adjustor to adjust a focus distance based on the specific measurement and a corresponding measurement in the set of measurements,

wherein the calibration sensor has a higher focus accuracy than each of the secondary control sensor and the primary control sensor.